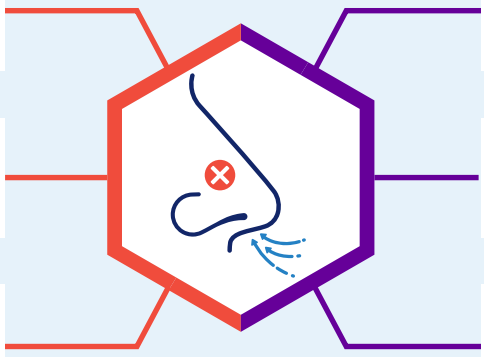
Chronic Rhinosinusitis with Nasal Polyps: The Interplay of Type 2 Inflammation and Smell Loss

Loss of the sense of smell is **one of the major symptoms** of CRSwNP[1,2]

It **impacts patients QoL**[3], and may **persist** even after the surgery[4]

Type 2 inflammation may play a role in yielding anosmia/hyposmia[5]

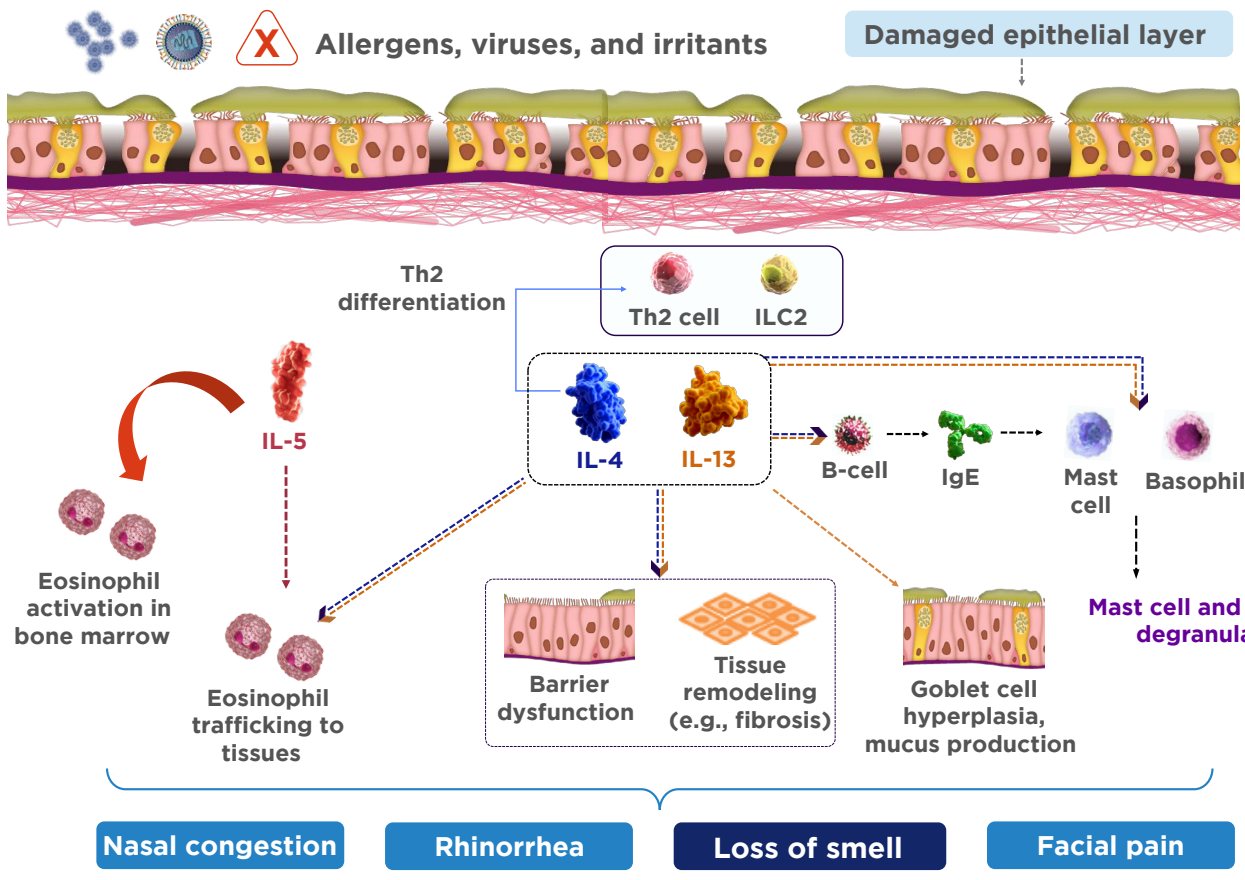


It affects **≈90%** of CRSwNP patients[1]

Anosmia/hyposmia can be an **early indicator** of disease recurrence[1,2]

Degree of type 2 inflammation is correlated with **severity of impairment of smell**[1,2]

Smell loss is associated with type 2 inflammation[5–9]



Smell loss represents a major burden for CRSwNP patients[1,2]

- Reduced quality of life (HR-QoL)[1,10]
- Daily activities are affected[3]
- Depression, anxiety, phobia, irritation, fatigue etc.[3]
- Altered interpersonal relationships[11]
- Economic burden, decreased productivity[12]

Smell improvement as measure of disease control

1. **International guidelines** emphasize the importance of the loss of the ability to smell as a treatment target[13–14]
2. **Assessment of olfaction[15–18] is crucial** for clinical evaluation of CRS[1]
3. **Management of smell loss** is complex and requires a multifaceted approach[19-21]

REFERENCE

1. Yan X, et al. Laryngoscope Investig Otolaryngol. 2020;5(6):992-1002; 2. Rouyar A, et al. *Allergy*. 2019;74(3):549-559; 3. Mullol J, et al. *J Allergy Clin Immunol Pract*. 2022;10(6):1434-1453.e9; 4. Seys SF, et al. *Allergy*. 2020;75(11):2867-2878; 5. Dekeyser A, et al. *Int J Mol Sci*. 2024;25:4460; 6. Bachert C, et al. *Front Immunol*. 2024;15:1356298; 7. Lee K, et al. *Int J Mol Sci*. 2021;92:910; 8. Fokkens WJ, et al. *Rhinology*. 2020;58:1-464; 9. Stevens WW, et al. *J Allergy Clin Immunol Pract*. 2016;4:565-572; 10. Hopkins C, et al. *Otolaryngol Head Neck Surg*. 2024;170(4):1173-1182; 11. Patel ZM, et al. *Int Forum Allergy Rhinol*. 2022;12(4):327-680; 12. Schlosser RJ, et al. *Int Forum Allergy Rhinol*. 2017;7(1):50-55; 13. Fokkens WJ, et al. *Rhinology*. 2024;62(3):287-298; 14. Orlandi RR, et al. *Int Forum Allergy Rhinol*. 2021;11(3):213-739; 15. Rumeau C, et al. *Eur Ann Otorhinolaryngol Head Neck Dis*. 2016;133(3):203-206; 16. Brumm MC, et al. *Neurology*. 2023;100(16):e1691-e1701; 17. Mullol J, et al. *J Allergy Clin Immunol Pract*. 2022;10(4):1086-1095.e5; 18. Doulaptsi M, et al. *Clin Transl Allergy*. 2018;8:32; 19. Marglani O, et al. *J Asthma Allergy*. 2023;16:1055-1063; 20. Senna G, et al. *Multidiscip Respir Med*. 2022;17(1):813; 21. Buchheit KM and Holbrook EH. Chronic rhinosinusitis with nasal polyposis: Management and prognosis. UpToDate. 2023. Available at *UpToDate*. Last accessed on 28 Aug 2024.

ABBREVIATIONS

CRS, chronic rhinosinusitis; CRSwNP, chronic rhinosinusitis with nasal polyps; HR-QoL, health-related quality of life; QoL, quality of life.

Asset document number: MAT-GLB-2405727 - 3.0 - 12/2024
CDP document number: MAT-GLB-2404904 - 1.0 - 08/2024
AI-assisted content